

What is Claimed:

1 1. A fluid pressure sensor comprising
2 a capacitive pressure sensing element having a first surface to be
3 exposed to a fluid pressure source to provide a capacitance value which varies
4 with the fluid pressure applied,
5 conditioning circuitry for converting the capacitance to output voltage
6 signals,
7 an electrically insulating connector and transducer terminals, the
8 connector mounting the terminals for connection to the conditioning circuitry, the
9 connector having a head portion forming a circuit chamber in which the
10 conditioning circuitry is disposed,
11 an electrically conductive cup-shaped member having a bottom wall
12 formed with a fluid receiving aperture and a circumferential sidewall extending
13 from the bottom wall to a free end portion, the pressure sensing element and
14 head portion of the connector received in the cup-shaped member with the free
15 end portion of the circumferential wall crimped to the head portion, the cup-
16 shaped member being electrically connected to the conditioning circuitry,
17 an electrically insulating sleeve, the cup-shaped member received in
18 the sleeve, and
19 a metal housing having first and second ends, the first end formed with
20 a circumferential wall having a free distal end portion, the wall of the housing
21 forming a cavity, a coupling portion of the housing formed with a fluid passage
22 extending from the second end to the cavity,
23 the cup-shaped member, head portion of the connector and insulating
24 sleeve received in the cavity of the housing with the free distal end portion of the
25 wall of the housing crimped onto the head portion and electrically separated from
26 the housing by the electrically insulating sleeve.

1 2. A fluid pressure sensor according to claim 1 in which the cavity of the
2 housing has a bottom wall and the sleeve extends between at least a portion of
3 the bottom wall of the housing and the cup-shaped member.

1 3. A fluid pressure sensor according to claim 1 further comprising a circuit
2 substrate, the conditioning circuitry being mounted on the circuit substrate, the
3 substrate having a tab including a conductive trace extending from the
4 conditioning circuitry, at least a portion of the tab being disposed between the
5 head portion of the connector and the crimped portion of the cup-shaped
6 member to electrically connect the conductive trace of the conditioning circuitry
7 with the cup-shaped member.

1 4. A fluid pressure sensor according to claim 1 further comprising an
2 annular gasket disposed between the bottom wall of the cup-shaped member
3 and the first surface of the capacitive pressure sensing element.

1 5. A fluid pressure sensor according to claim 4 in which the gasket is
2 electrically conductive.

1 6. A fluid pressure sensor according to claim 1 in which the cavity of the
2 housing has a bottom wall and further comprising an O-ring received on the
3 bottom wall of the housing between the bottom wall of the housing and the cup-
4 shaped member.